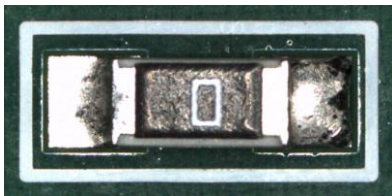


TECHNOLOGICALLY ADVANCED

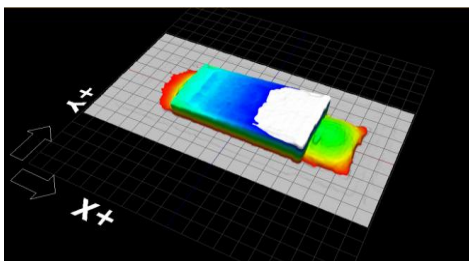
MV-7 OMNI 2D/3D Series

MIRTEC

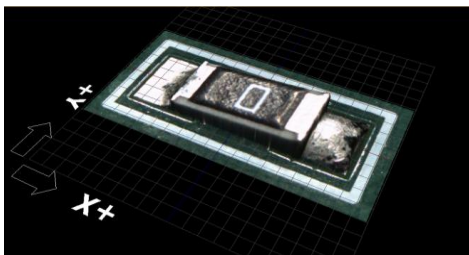
- Five Camera 2D/3D In-Line AOI System
- Exclusive **FIFTEEN MEGA PIXEL** ISIS[®] Vision System
- Advanced Six Phase Color Lighting Technology
- 10 Micron / Pixel Precision Telecentric Compound Lens Design
- Integrated Ten Mega Pixel **SIDE VIEWER[®]** Camera System
- Precision Closed Loop AC Servo Drive Motor System
- Extremely Simple Programming and Operation



Ultra High Resolution 2D Image



3D Shape Image - Lifted Device



Advanced 2D/3D Image Processing



- Exclusive **OMNI-VISION[®]** 2D/3D Inspection Technology
- Advanced Digital Multi-Frequency Quad Moiré Design
- Superior Lifted Lead Detection for Gull Wing Devices
- True Co-Planarity Inspection of Chips, BGAs and Other Height Sensitive Devices



www.mirtec.com

MV-7 OMNI Series Features and Specifications

Max PCB Size Range

| | |
|------------------------------------|-------------------------------------------------------------------|
| MV-7 OMNI | 50 mm x 50 mm to 510 mm x 460 mm (2.0" x 2.0" to 20.1" x 18.1") |
| MV-7U OMNI | 60 mm x 60 mm to 660 mm x 610 mm (2.36" x 2.36" to 26.0" x 24.1") |
| MV-7DL OMNI (Dual Lane / One Head) | 50 mm x 50 mm to 330 mm x 250 mm (2.0" x 2.0" to 12.99" x 9.84") |

Image Transfer Technology

| | | | |
|--------------|---------------------|-------------|--------|
| 15 MP Camera | 3,904 x 3,904 Pixel | Camera Link | 45 fps |
|--------------|---------------------|-------------|--------|

OMNI-VISION® 2D / 3D Inspection Technology

| | | | |
|--------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------|
| 3D Inspection Technology | Digital Multi-Frequency Quad Moiré Technology | | |
| 2D Inspection Technology | 15 Mega Pixel ISIS® Vision System | | |
| Height Accuracy | ±3 µm | | |
| Maximum Component Height | 15 Mega Pixel | Option 1 (15 µm) | 6 mm |
| | | Option 2 (10 µm) | 4 mm |
| Inspection Item | 2D Inspection | Missing Component, Wrong Component, Mis-Alignment, Skewed Component, Polarity, Tombstone, Bridge, Flipped, Solder Ball, Etc | |
| | 3D Inspection | Height, Position, Lifted Package, Lifted Lead, Solder Fillet, Excessive Solder, Insufficient Solder, Open Solder, Etc | |

ISIS® Vision System (FOV Size)

| | | | | |
|----------------------|----------------------|----------|--------------------------|-------------------------------------|
| 15 Mega Pixel Camera | 3,904 x 3,904 Pixels | Option 1 | Pixel Resolution : 15 µm | 58.56 mm x 58.56 mm (2.31" x 2.31") |
| | | Option 2 | Pixel Resolution : 10 µm | 39.04 mm x 39.04 mm (1.54" x 1.54") |

2D Maximum Inspection Speed

| | | | | | |
|----------------------|----------------------|----------|-------------------------|----------------|-------------------------------|
| 15 Mega Pixel Camera | Camera Link @ 45 fps | Option 1 | Pixel Resolution :15 µm | 0.36 sec / FOV | 9,526 mm2/sec (14.76 in2/sec) |
| | | Option 2 | Pixel Resolution :10 µm | 0.34 sec / FOV | 4,482 mm2/sec (6.95 in2/sec) |

2D / 3D Maximum Inspection Speed

| | | | | | |
|----------------------|----------------------|----------|-------------------------|----------------|------------------------------|
| 15 Mega Pixel Camera | Camera Link @ 45 fps | Option 1 | Pixel Resolution :15 µm | 1.35 sec / FOV | 2,540 mm2/sec (3.94 in2/sec) |
| | | Option 2 | Pixel Resolution :10 µm | 1.21 sec / FOV | 1,260 mm2/sec(1.95 in2/sec) |

System Specifications

| | | | |
|------------------------------|----------------------------------------------------------|---------------------------------------------------|---------------------------------------------------|
| Lens Configuration | Precision Telecentric Compound Lens Design | | |
| Lighting System | Six Phase Color Lighting | | |
| Side Viewer® Camera System | 10 Mega Pixel Digital Color Side Cameras (Quantity Four) | | |
| PCB Top Side Clearance | 45 mm | | |
| PCB Bottom Side Clearance | 25 mm (Option : 50.8 mm) | | |
| Maximum PCB Warpage | ±3 mm | | |
| Barcode System (Option) | 1D or 2D Barcode Reader | | |
| Built-in SPC | Statistical Process Control Software (Local) | | |
| Built-in Repair | Repair Plus Software (Local) | | |
| OLTT (Option) | Off-Line Teach Tool Software | | |
| Minimum Component Inspection | 15 Mega Pixel | Option 1 (15 µm) | 0603 Chip (mm) / 0201 Chip (in) / 0.4 Pitch (mm) |
| | | Option 2 (10 µm) | 0402 Chip (mm) / 01005 Chip (in) / 0.3 Pitch (mm) |
| Robot Positioning System | X/Y Axis | Precision Closed Loop AC Servo Drive Motor System | |
| | Resolution | 1 µm | |
| | Repeatability | ±10 µm | |
| Power Requirements | MV-7 OMNI | Single Phase 200~240V 50~60Hz; 1.1 KW | |
| | MV-7U OMNI | | |
| | MV-7DL OMNI | | |
| Air Requirements | 5 Kgf/cm2 (0.5 Mpa); (7 PSI) | | |

Machine Dimensions and Weight

| | | |
|-------------------------|-----------------------------------------------------------|-----------------------|
| MV-7 OMNI | 1,100 mm W x 1,500 mm D x 1,500 mm H (43.3" x 59" x 59") | 1,000 Kg (2,204 lbs.) |
| MV-7U OMNI | 1,270 mm W x 1,680 mm D x 1,500 mm H (50" x 66.14" x 59") | 1,200 Kg (2,645 lbs.) |
| MV-7DL OMNI (Dual Lane) | 1,100 mm W x 1,500 mm D x 1,500 mm H (43.3" x 59" x 59") | 1,200 Kg (2,645 lbs.) |

